Response of
Wisconsin Power and Light Company
to
The Public Service Commission of Wisconsin
Data Request No. 3.23

Docket Number:	05-CE-137
Date of Request:	March 11, 2009
Information Requested By:	Ken Detmer
Date Responded:	April 1, 2009
Author:	Joe Holliman
Author's Title:	Sr Asset Strategy Consultant
Author's Telephone No.:	(608) 458-3841
Witness: (If other than Author)	

Data Request No. 3.23:

Explain how fixed and variable O&M costs are modeled along with future capital expenses within EGEAS. Provide spreadsheet analysis (both paper and electronic) for all future costs modeled as Fixed and Variable expenditures in EGEAS. This should be done in a similar way for all plants with emission control additions.

Response:

Using the EGEAS user interface screens as a guide, fixed operation and maintenance (O&M) costs are modeled in EGEAS in the Unit Data – Fixed Costs screen in $/kW/year. Fixed O&M costs may also be modeled in the Unit Data – Detailed Cost screen as $/kW using the transmission/distribution and other cost components. In both instances the base year cost is entered and a trajectory may be established to express the costs in year of occurrence terms.

Variable O&M costs are modeled in EGEAS in the Unit Data – Production Cost Information Screen in $/MWh. Variable O&M may also be modeled in the Unit Data – Detailed Cost screen as $/MWh using the transmission/distribution and other cost components. In both instances the base year cost is entered and a trajectory may be established to express the costs in year of occurrence terms.

In general, future capital expenses are modeled for two purposes:

A. to capture the capital and booked costs of a new planning alternative or
B. to capture the capital and booked costs of a major capital investment on an existing generation unit.

In the first of the these instances, capital costs are best modeled by selecting from one of three cost analysis alternatives in the System Data – Control Information screen. These three alternatives are:

- No Construction Costs, Levelized Fixed Charges;
- No Construction Costs, Annual Non-Levelized Fixed Charges; or
- Construction Costs, Annual Non-Levelized Fixed Charges.

Data input requirements will vary for each of these alternatives.

To model or capture the capital and booked costs of a major capital investment on an existing generation unit, one of three alternative approaches may be used:

First, retire the existing unit at the end of the year before the investment is expected to be made and specify a replacement unit to come on line the year following the retirement of the existing unit. The new unit will have similar characteristics to the existing unit, however those operational characteristics and costs (e.g. fuel or O&M) affected by the capital investment will be reflected in the new unit. In the new unit, the major capital investment should be modeled using one of the three above-noted alternative capital cost modeling methods in the System Data – Control Information screen. The new unit will be specified as a committed unit.

Second, revise the on-going fixed O&M costs of the existing unit to include a major investment, such as a stator rewind, in the trajectories for this cost.

Third, specify the revenue requirements for the capital investment and booked costs, in $/kW as either a transmission/distribution or other cost component in the Unit Data – Detailed Cost screen. In this approach, the unit would not be retired and replaced. Rather, the annual revenue requirements would be specified as a $/kW fixed O&M type cost in base-year terms and a schedule or trajectory of escalators would be used to reflect annual fixed charges or revenue requirements. The trajectory would be established such that the fixed charges would be added to annual revenue requirements (for PVRR analysis) beginning in the year in which they would be assumed for rate-making cost recovery. Other operational costs and characteristics of the unit could be varied at the time of commercial operations of the new investment through the various appropriate trajectories.

In Attachment A, a **Confidential** spread sheet is provided that lists the operating and maintenance costs modeled as fixed and variable for each of the existing, committed, and generic generation resources included in the EGEAS data base supporting WPL's response to PSCW Data Request No. 2.22. This sheet also includes revenue requirements for capital costs modeled as fixed O&M costs in EGEAS screens Unit Data – Fixed Costs and Unit Data Detailed Costs.